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10/070,311	05/31/2002	Michael S Cox	Q68557	3092

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EXAMINER

PATEL, CHIRAG R

ART UNIT

PAPER NUMBER

2141

DATE MAILED: 07/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/070,311

Applicant(s)

COX ET AL.

Examiner

Chirag R. Patel

Art Unit

2141

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _____ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 May 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) 8 and 9 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 10-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 47400/99.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Response to Arguments

The examiner has acknowledged receipt of the Information Disclosure Statement filed on January 27, 2005. Claims 8 and 9 were not addressed because they are cancelled. Applicant's arguments filed for claims 1-7 have been fully considered but they are not persuasive.

As per claim 1, applicant argues:

A) Since Chen only teaches splitting nodes into groups and fails to teach or specify a criteria for the splitting/breaking of the nodes into groups, the rejection must be withdrawn as the Chen reference lacks "sufficient specificity" required under 102. Anticipation under 102 can be found only when the reference discloses exactly what is claimed and that where there are differences between the reference disclosure and the claim, the rejection must be based on 103 which takes differences into account." *Titanium Metals Corp. v. Banner*, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985); MPEP j 2131.

Therefore, the plurality of nodes are grouped into units of a first level of the hierarchy, based on at least one of geographical proximity, network ownership, and traffic flow," as set forth in claim 1, is not disclosed by Chen, which lack any disclosure as to how the nodes are logically and physically split into groups.

Examiner's Response:

Chen discloses per Col 8 lines 15-42 "When a multicast group is set up, the core nodes for that group are also selected, wherein each group has its own set of core

Art Unit: 2141

nodes. Border nodes are good candidates for core nodes. Intuitively, this makes sense because border nodes are more likely to be a part of the multicast tree. Nodes with larger degree also make better core nodes. Since core nodes have to handle high bandwidth, it is clear that nodes without sufficient bandwidth are poor choices as core nodes. It cannot be proven that one of these criteria is more important than the other, however, a border node with a large degree and sufficient bandwidth seems to be the best choice as a core node. As would be understood, care must be taken so that the same nodes do not get selected as the core nodes for several multicast groups, as heavily loaded core nodes will adversely affect performance."

B) Applicant argues: In addition, claim 1 recites; the units of same level exchange a corresponding load status information." For example, the units of the same level exchange the current value of the traffic level (or an aggregation of this value) which is monitored in each node (e.g. , page 4, lines 11-18 of the specification). This load status information is used to frequently determine the appropriate path between the source and destination of a message.

Chen, however, only discloses that the available bandwidth, the mean delay on the link, and the peak cell rate supported by the link are flooded within the peer-group of the node. In Chen, these values are inherent characteristics. That is, these values do not change unless in a case of a reconfirmation. In other words, Chen fails to teach or suggest exchanging the load status information. Furthermore, in Chen, these values are determined once and then remain more or less fixed. Chen fails to teach or suggest these values being frequently measured/updated. Therefore, the units of same level

Art Unit: 2141

exchange a corresponding load status information" as set forth in claim 1, is not disclosed by Chen, which lacks signaling load status as the load status information is used to frequently determine the appropriate path between the source and destination of a message and as such is frequently updated.

Examiner's Response:

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., these values do not change unless in a case of a reconfiguration) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See In re Van Geuns, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

As per column 5 lines 20-28, Chen et al. discloses "Similar to OSPF, efficient routes can be computed only by collecting information about states of the nodes and the links in the network. This information constitutes the topology information of the network. The link state includes information like the available bandwidth, the mean delay on the link and the peak cell rate that can be supported by the link. The node state includes aggregate information about the peer-group and the end systems attached to the switching system. Each node periodically floods the topology state information within its peer-group. Other nodes that belong to the peer-group update their databases with this information. Thus, each node in the peer-group has accurate information about the node and link states of all the topology elements within the peer-

Art Unit: 2141

group.” The information allows for efficient routes as mentioned above to be computed and the appropriate path between the source and destination of a message.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-7 and 10-13 are rejected under 35 U.S.C. 102(e) as being anticipated by Chen et al. (US 5,831,975)

As per claims 1 and 13, Chen et al. discloses a network comprising

a plurality of nodes; and a plurality of a plurality of links, each node being connected to at least one other node by a respective link from the plurality of links, (Col 9 lines 10-33, Figure 1 item B.22, B.14, B2, B1)

wherein the network is arranged in a hierarchy of at least two levels, (Col 9 lines 10-33, Figure 1 items 22,23)

the plurality of nodes are grouped into units of a first level of the hierarchy, based on at least one of geographical proximity, network ownership , and traffic flow, (Col 8 lines 15-42)

units of higher levels of the hierarchy are formed by groupings together the units of previous level of the hierarchy; (Col 9 lines 10-33) and the units of same level exchange a corresponding load status information. (Col 5 lines 20-28)

As per claim 2, Chen et al. discloses the network as claimed in claim 1 wherein, within each group of units, a master entity is designated, the master entity conveying inter-unit load status information relating to the units of the level of the master to the next higher level. (Col 5 lines 16-41)

As per claim 3, Chen et al. discloses the network as claimed in claim 1 wherein, in the first level, a selected node in each group is designated as the master node for the corresponding group, and the master node manages the transfer of node load status information within its corresponding group. (Col 5 lines 16-42)

As per claim 4, Chen et al. discloses the network as claimed in claim 1 wherein the load status information includes information on the available traffic capacity between the ports of each unit. (Col 5 lines 20-28)

As per claim 5, Chen et al. discloses the network as claimed in claim 1, wherein each node includes node load status monitoring means to monitor the load status of the links connected to the node. (Col 5 lines 20-28)

As per claim 6, Chen et al. discloses the network as claimed in claim 1, wherein least one node of each second level group is connected to a node of at least one other second level group via a corresponding group link whereby group load status information can be interchange. (Col 9 lines 10-33)

As per claim 7, Chen et al. discloses the network as claimed in claim 6, wherein the units of the third level are formed by mutually interconnected second level units. (Col 9 lines 10-33, Figure 3 : item 64 A&B)

As per claim 10, Chen et al. discloses the network as claimed in claim 3, wherein nodes in a unit send the load status information to only the master node. (Col 5 lines 16-42)

As per claim 11, Chen et al. discloses the network as claimed in claim 10, wherein the master node generates a message comprising all higher level load status information and collated information about the unit nodes. (Col 5 lines 16-42)

As per claim 12, Chen et al. discloses the network as claimed in claim 11, wherein the message comprises load status information at a regional link level, at inter-network links, at inter-group links, and at the unit nodes. (Col 5 lines 16-42, Figure 1)

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

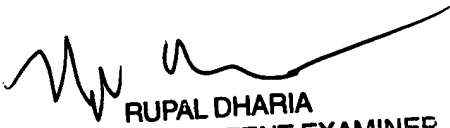
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. These references are disclosed in the Notices of References cited page and teach numerous ways of implementing a recursive traffic distribution IP/Data Network model. A close review of these references is recommended.

Art Unit: 2141

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chirag R. Patel whose telephone number is (571)272-7966. The examiner can normally be reached on 7:30AM - 4PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rupal Dharia can be reached on (571) 272-3880. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



RUPAL DHARIA
SUPERVISORY PATENT EXAMINER